



## SUBSTITUTE SPECIFICATION

### IMAGE FORMING APPARATUS WITH COLOR SHIFT SENSORS THAT ARE SHIELDED FROM TONER

#### BACKGROUND OF THE INVENTION

#### FIELD OF THE INVENTION

The present invention relates to the correction of an output of a density sensor and a dust-proof mechanism for the density sensor and color shift sensors, which density sensor and color shift sensors are used in a color electrophotographic recording apparatus.

#### DESCRIPTION OF THE RELATED ART

A conventional color image forming apparatus incorporates image forming sections for the respective colors and a supporting member provided below a transfer belt that is in contact with these image forming sections. A left color shift sensor and a right color shift sensor are disposed on the supporting member and aligned in a direction transverse to the direction in which the transfer belt runs. The left color shift sensor and right color shift sensor detect positional errors among images of the respective colors at the left end and right end of a width of the transfer belt. A density sensor is disposed midway between the left and right color shift sensors. The sensors are located immediately below the transfer belt and directly face the transfer belt with nothing existing between the transfer belt and these sensors.

With such a conventional color electrophotographic recording apparatus, the upper surfaces of the color shift sensors and the density sensor are exposed. The upper surfaces attract dust, waste, and toner, so that toner adhering to the transfer belt may drop from the transfer belt onto the light-receiving surfaces of the sensors to prevent normal detection of light. Additionally, the output of the sensors varies from sensor to sensor, so that there are variations in sensor output even when the same object is measured.

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